ECONOMIC CRISES

Many and varied factors have been assigned as the cause of crises. Some writers, it seems, have mistaken effect for cause. Others have singled out one factor as the cause, ignoring others of equal or greater importance. Still others have recognized the complexity of a crisis situation and given recognition to many factors, but one places emphasis on one, another on another. Indeed it is probable that the problem in connection with crises now is not altogether the development of new theories. We have theories in abundance. Instead, it is to determine the degree of truth in each, for most theories of crises appear to have some scientific foundation, and then to determine the relative importance of each. After this has been done there remains the task of combining these theories into a harmonious whole. The situation would be less complicated if writers on the subject of crises avoided the use of vague or poorly defined terms.

The following theory of crises is presented in a condensed form with no attempt at complete substantiation of each point advanced. The introduction of extended evidence would necessitate an article of unwieldy length. The theory as here given is in the nature of a summary of the conclusions reached after a careful study of crises. Such a presentation, although it may not carry conviction with it, should have suggestive value. For further evidence in support of the theory, I have referred to my earlier articles relative to crises. It is, moreover, my intention to make a more extended exposition of the subject in a series of articles now in course of preparation.

A genuine economic crisis, such as has occurred at intervals during the present and past centuries, is a situation in which a large number of debtors find themselves unable to meet their obligations when due; accompanied, preceded, or followed by a marked falling-off in the demand for goods. Separating the financial phenomena from the industrial, for analytical purposes, a financial crisis is a situation in which a large number of debtors are unable to meet their obligations. A measure of the severity of the financial

crisis is the number, territorial extent, and amount of liabilities of failed concerns. An industrial crisis is a marked falling-off in the demand for goods. A measure of the severity of the industrial crisis is the fall of commodity prices.[1]

Taking up the industrial cycle first, the prosperity of industry preceding the crisis is due to the enlarged demand for goods. This increased demand comes primarily from promotion, that is, from efforts to procure capital goods to enlarge industries and to establish new ones. No data are available to show the extent to which new industries are being established, and old lines of industry are being extended. Figures for railway construction expressed in mileage are quite comprehensive, making it possible to measure the relative demand for railway materials from year to year, but such complete statistics are not available for many industries. The best guide obtainable as regards the total demand for capital goods to be used in furthering enterprises of all kinds, is the amount of securities offered on the market by the newly organized concerns. New capital applications in England have been recorded for a considerable period of time, and more recently similar computations have been made for this country.[2] During boom times the rate of increase of capital applications is enormous. In England before the crisis of 1873 the increase was 530 per cent; before the crisis of 1883, it was 339 per cent; before the crisis of 1890 the rate of increase was less, 165 per cent; before the crisis of 1900, the increase was 236 per cent.[3] The demand for capital goods to supply the needs of these new companies causes the prices of such goods to rise. The rise of prices increases the profits of the producers of

[1] Juglar says the crisis is the fall of prices (cf. also Laughlin's ed. of Mill, p. 338). The fall of prices, however, is an effect, rather than a cause. It is true, though, that the fall of prices will make many readjustments necessary and probably cause some failures.

[2] The new securities issued in the United States from 1905 to date, according to Babson's *Report*, are as follows:

1905	$1,238,978,000	1909	$1,681,620,680
1906	1,637,013,350	1910	1,518,272,579
1907	1,393,913,300	1911	1,739,487,720
1908	1,423,199,371	1912	2,253,587,296

[3] M. T. England, *Influence of Credit on Prices*, "University Studies" (University of Nebraska), January, 1907, p. 12.

capital goods,[1] and stimulates production. So important is this demand that one can say with a large degree of accuracy that "promotion" and "prosperity" are synonymous. There is also an increase in the demand for consumption goods. Prosperity is always accompanied by a general rise in the standard of living. However, the increased demand for consumption goods should be regarded more as an effect of prosperity than as a cause of prosperity, although, of course, it contributes also to the total demand for goods. But broadly speaking industrial prosperity is caused by the increasing demand for capital goods to start new enterprises; conversely, industrial depression is caused by the decreasing demand for capital goods.[2] Prices will continue to rise as long as enterprisers keep up their demand for capital goods. The stoppage of promotion means less purchasing power offered for goods, and hence, other things being equal, a fall in prices.

One may well ask: Why does promotion, which has been going on so rapidly for months and years, bringing with it prosperity, begin to decline? This is the crucial question in connection with crises. It is comparatively easy to construct a theory that will, apparently at least, account for increasing prosperity. But explanations of declining prosperity that square with facts are so difficult to formulate that the cause of industrial depressions is still an obscure point in economics.[3] If we recognize that promotion and prosperity are practically synonymous, it gives tangibility to the rather indefinite ideas which are connected with the term "prosperity," and makes the task of explaining the check to prosperity much more definite. The check to prosperity may come, I believe,

[1] For example, in the period of prosperity preceding the crisis of 1900 when Russia was actively engaged in promoting railways, the iron works of Russia paid remarkable dividends. The South Dnieprow works, for instance, in five years paid 170 per cent on its capital.

[2] Hull (*Industrial Depressions*, p. 140) rightly says that "what we call booms result almost entirely from the great periodic increase in the volume of construction, and what we call industrial depressions result almost entirely from the great falling-off in the volume of construction."

[3] Professor Ely says (*Outlines of Economics*, p. 267): "It is difficult, even impossible, for observers to analyze all the factors entering into a particular crisis, and it is even more difficult to formulate a theory of crises that will be of general applicability."

from any one of the three reasons given below, or from part or all of them acting together:

1. Promotion may stop because investors have taken all the risks they care to assume. Undoubtedly, there is great risk attached to every new enterprise, for there is no way to tell whether a new industry will pay except to try it; and then it is too late, if the enterprise prove to be a failure, to withdraw funds invested. There is, therefore, a limit to the amount of capital investors can be induced to put into extremely speculative enterprises. Promoters, however, keep on with their work as though there were no such limit until the slow market for securities brings the realization that there has been an overproduction of securities—a well-recognized situation on the stock exchange.[1] This check to prosperity has no direct connection with the currency system, with profits, with interest rates, with tariffs, or with any of the factors usually given as the causes of crisis or depression. Yet, although strictly psychological, it is often an important element in stopping promotion.

2. Promotion may stop because the banks refuse to increase their loans for the reason that they have already loaned all that is compatible with banking capital and reserves. In this connection mention is made of the banks because they are the chief although not the sole source of promotion funds. In such a case there is no alternative for a country which has used up all of its surplus capital, unless it can resort to foreign borrowings, but to stop promoting and enter into the period of depression which inevitably follows the lessened demand for goods.

3. Promotion may stop because distrust has been awakened regarding the future course of enterprise. This distrust may arise in many different ways. Perhaps it is due to the fact that returns upon investments of all kinds and new ones in particular have turned out to be less than promised or expected. The returns may have been not at all poor in comparison with the capital invested,

[1] Gibson (*Cycles of Speculation*) says regarding the depression of 1903: "Capitalization of railroads in 1903 increased about 14 per cent as compared with an average increase of 6 per cent in the preceding seven years. Add to this the tremendous increase in the capitalization of industrial corporations, and an oversupply of stocks appears as one of the contributory causes—undigested securities."

but if they are less than the investors expected, the announcement of the dividend acts as a wet blanket on promotion enthusiasm.[1] Promotion may stop also because returns in many lines of industry are actually poor. Much capital just invested is recognized as wasted, and in other cases the returns are so long delayed as to cause investors to become discouraged. Promotion may stop because of some blow to industry, such as fires, earthquakes, and floods. It may stop because of legislation or expected legislation unfavorable to industry. Promotion may be discouraged because enterprisers are unwilling to pay the prevailing high interest rates.[2] Promotion may stop owing to the fear of a credit contraction or from the actual contraction such as occurs during a financial crisis. The refusal of banks to loan to enterprisers and promoters, because the banks have become pessimistic as to the future course of enterprise, is the familiar situation in which banks are "becoming con-

[1] Gibson (*op. cit.*), discussing the cause of the depression of 1903, says:

"If conditions had been such as to cause a reduction of dividends, or a scarcity of money in 1903, the decline would be explained, but money was plentiful enough and dividends were unchanged. The ratio of dividends as compared with prices was also fairly maintained from 1896 to 1902, and it would appear that prices should merely stop advancing when dividends became stationary; but prices did not merely stand still, they went materially backward.

"Dividend rates were maintained, but were not increased. This particularly affects the simon-pure speculator. Nothing will drive him into a panic quicker than a decreased dividend, and nothing makes him so sanguine of higher prices as an increase in the rate of payment. He is always basing his operations on rumors of higher dividends, and when one of these rumors fails of verification, it is almost as bad as a decrease.

"And dividends did decrease in one important quarter; United States Steel, the speculative favorite, capitalized more heavily than a dozen ordinary corporations, cut its rate from 4 to 3½ per cent, with every promise of a further reduction. This had a far-reaching effect, both on speculators and small investors.

"The small investor helped. He, too, is a dividend man; he seldom looks at earnings, improvements, or extensions—he wants dividends. United States Steel was a body blow to him; it not only affected his purse, but it frightened him."

[2] Professor Fisher in his *Purchasing Power of Money*, chap. iv, is so impressed with this factor that he makes the rise of interest the sole cause of the decline of prosperity, whereas it is, I believe, as a rule, only a relatively minor one among many; moreover, he fixes a definite point (the point at which virtual interest overtakes nominal) as the stage prohibitive to borrowers. But apparently the prohibitive stage has little to do with virtual interest; it is reached only when the rate of interest is equal to or higher than expected returns on capital. See my criticism of his theory in *Quarterly Journal of Economics*, November, 1912.

servative." Their apprehension may be well founded, being based upon the frequent requests for renewals of loans and for longer-time loans which is characteristic of the pre-financial-crisis situation.

Whether the distrust of the course of future enterprise is with or without cause, the result will be the same in one particular—promotion will stop and depression will begin. The difference lies in this: if the suspicion of the future is found to be unjustified, the check to prosperity will be of short duration: promotion will soon begin again. If the suspicion is well founded, promotion will not recommence until after liquidation has run its course.

A financial crisis—a situation in which a large number of debtors are unable to meet their obligations when due—comes primarily from the fact that industry and finance have failed to yield returns as large as the estimates of profits which formed the basis of borrowings or subsequent expenditures; or, secondarily, from a contraction of credit. Whatever the cause of the contraction of credit, it will result in a large number of failures merely because business calculations are upset when the expected credit accommodations are not obtainable. One of the problems of the financial crisis, therefore, is how to prevent the failure of firms that are solvent so far as assets are concerned. But in a typical financial crisis the chief failures are not those brought about through defective credit accommodations or from high interest rates,[1] as is so often implied. The important failures are those of concerns that have not made good during the preceding period of prosperity. In other words, under a perfect credit and currency system which allowed no firm with adequate assets to fail, there would still be heavy failures of firms with insufficient assets. It is for the good of society that the insolvent concerns should be reorganized, their businesses put upon a paying basis through the introduction of economies, or their capitalization written down until satisfactory dividends can be paid on it.

The question is: Why do we have periodically this large number of failures of genuinely insolvent enterprises? Obviously, dis-

[1] Fisher (*Purchasing Power of Money*, pp. 65–66) says: "This culmination of an upward price movement is what is called a crisis—a condition characterized by bankruptcies, and the bankruptcies being due to a lack of cash when it is most needed."

appointment in profits may result from a wide range of causes. Calculations of business men are often greatly upset by disturbances of production due to natural causes such as crop failures,[1] fires, earthquakes, storms, and so on. Disappointment in profits may arise from political situations: wars, invasions, revolutions, and so on, and from changes in governmental policies.[2] Great disappointments as well as great gains come from speculation on the stock and produce exchanges and from speculation in real estate. Disappointment in profits may arise from abnormal hopes of profits registered in the exaggerated rise of prices on the stock exchange. Logically the rise and fall of the prices of stocks should parallel the increase and decrease of earning power of the companies represented. But stock prices are determined also by the *expected* earning power of the companies. The prevailing optimism of a period of prosperity shows itself in a rise of prices out of all proportion to present earning power, and, as it sooner or later turns out, out of all proportion to future earnings.[3] Since the ownership of shares is widely distributed, the disappointment arising from the fact that stock earnings prove less than expected is very general. This does not mean that returns were not remunerative, but merely less than had been counted on.

[1] Jevons bases his whole theory of crises upon crop conditions, so important does he consider this factor.

[2] It is, of course, going too far to say, as we have heard it said so often in the recent and other campaigns, that a change in administration will cause a crisis; or to strive to construct a theory of prosperity upon tariff changes alone, as do John M. Robertson (*Trade and Tariffs*) and many other writers.

[3] RISE IN PRICES OF SECURITIES BEFORE A CRISIS

Crisis	Securities	Per Cent of Rise
England—		
1866	10 railway shares	46
1873	10 railway shares	60
1890	All leading shares	7
1900	All leading shares	19
United States—		
1884	60 railway stocks	179
1893	60 railway stocks	11
1903	60 railway stocks	109
1903	20 railway stocks	110
1903	12 industrial stocks	74

—M. T. England, *Influence of Credit on Prices*. Table VI.

Again, disappointment in profits may be due to the fact that industry, although unaffected by any of the aforementioned factors, has failed to yield average or normal returns. During every period of prosperity there are usually some lines of industry which suffer from overproduction,[1] due to the too rapid output of goods in those lines or to the shifting of demand to other lines leaving the unfortunate producers with unsalable goods on their hands.[2] Again, there are lines of industry which have a ready market for their goods, but are nuable to turn out the expected quantities of produce, and which find as a result that profits are below expectations.[3]

As is well known, much emphasis has been placed upon overproduction, underproduction, or malproduction. But of greater importance, I believe, is the disturbance of production due to the increase in the cost of production in some lines of industry relatively to others.[4] Some producers find their cost of production increased 50 per cent as compared with a 10 per cent increase in other lines. If they attempt to compensate themselves by raising the price of their product 50 per cent, demand shifts to the lines of relatively lower cost (unless, of course, the article is one of necessity for which no substitutes are obtainable, if such an exchange commodity exists). The profits of the industries under the higher cost of production dwindle, while the profits of the enterprises under the lower cost of production increase.

Surely such a situation is not foreseeable and hence preventable. Nor can it be called anarchy of production, or maladjustment of supply and demand as ordinarily meant. *It is a situation that will inevitably arise every time promotion begins.* Every new enterprise started makes heavy demands for some raw materials and a lesser

[1] Professor Ely rightly says (*Outlines of Economics*, p. 267) that "crises spring from mishaps in the valuation of things; they relate to what might be called the dollars and cents aspect of economic life." He considers it misleading, therefore to speak of overproduction or underconsumption and so on as the causes of crises, yet surely these "mishaps in the valuation of things" often originate in the varying conditions of production, and in that sense these conditions are causal.

[2] Professor White holds (*Money and Banking*, 3d ed., p. 179) that the "genesis of every true commercial crisis can be traced to such a disproportionate investment of capital in some particular branch or branches of trade and in speculation."

[3] The mining industry is typical.

[4] For a detailed comparison of the relative price movements of groups of commodities see Tables XVII–LI in *Influence of Credit on Prices* referred to above.

demand for others. The result is that the rise of prices of raw materials of various kinds is very unequal. Industries which use relatively large quantities of coal and iron,[1] for instance, will find their cost of production increasing very rapidly, while industries using less generalized raw materials will find their cost of production only slightly increased.

Similar inequalities will occur in the comparative rise of raw materials, wages, rents, interest, and the various elements that go to make up the cost of production,[2] so that all lines of industry, new and old alike, are placed upon an increasingly speculative basis. Such is the price we pay for promotion, which, however, is our only means of obtaining material progress.[3] It is not to be wondered at that such a general stirring-up of industry brings disaster to many who, after staving off settlement as long as possible, are finally obliged to confess their inability to meet their obligations. At the same time they realize that their failure has been due, not to a lack of business acumen, but to a situation beyond their control.

It is conceivable, then, that the crisis may germinate solely in the inability of certain producers to compensate themselves for the increased cost of production by raising the price of their finished products. In that case the physical output of goods may have neither increased nor diminished, demand may have remained the same as formerly at the customary price. But the increased cost of production will not permit of the goods being sold at the cus-

[1] Before the crisis of 1900 in Europe the rapid rise of the prices of various raw materials worked great hardship. The London *Economist* declared it was the almost prohibitive price attained by coal that stopped the trade boom of 1899–1900. Cf. M. T. England, *Speculation in Relation to the World's Prosperity*, "University Studies" (University of Nebraska), January, 1906, pp. 46–48.

[2] "An examination of trade reports from fifty-three different industries in Germany for 1906, the year before the crisis, gives results as follows: 26 complain of small or reduced profits; 7 speak of a lessened demand for products; 11 mention keen or excessive competition; 28 refer to unsatisfactory prices, implying that the price of the finished product cannot be pushed up to compensate for the higher cost of production; 1 cites the high cost of production; 5 complain of strikes or labor troubles; 8 mention reduction in hours of labor; 9 refer to a scarcity of labor; and 25 speak of a rise in wages. Only 4 mention the rise in interest rates, while 43 speak of the rise in the prices of raw materials."—M. T. England, "Fisher's Theory of Crises," *Quar. Jour. Econ.*, November, 1912, p. 102.

[3] Cf. W. G. L. Taylor, *Kinetic Theory of Crises*, "University Studies" (University of Nebraska), Vol. V, No. 1.

tomary price without encroachment upon profits. A rise in price curtails demand and through lessened sales cuts down profits.

Such a situation is to be distinguished from that embodied in the theory that the cost of production in general tends to increase more rapidly than the prices of the finished products in general,[1] which is the common overproduction theory. General demand for goods during the period of prosperity may have increased, *on the average*, 25 per cent, and the cost of production, *on the average*, only 10 per cent; but owing to the fact, as stated above, that the increase in the cost of production is always relatively greater in some lines than others, demand will readjust itself accordingly, and some industries will find their profits dwindling while others' profits are rapidly increasing. There is, then, no general fall of profits before the crisis; the general fall comes after, as an effect of the stoppage of promotion.

Rising prices, therefore, through their disturbance of business calculations, may result in disappointing profits in enough lines of industry to engender the distrust of the future course of enterprise which is the most effective check to promotion and hence to general business activity.

In the ordinary period of prosperity preceding a crisis, practically all of the factors enumerated above as tending to upset the well-laid plans of the business world are operative. Hence the complexity of the situation, leading one writer to single out one thing as the cause and another some other phenomenon. In the different crises, it is true, the relative importance of those factors changes. The crisis of 1636 in Holland was due primarily to speculation in tulip bulbs. The crisis of 1701 in Scotland was an "underproduction" crisis—the wasting of capital in the Darien enterprise. The crises of 1707, 1714, and 1745 in England were political in origin. The crisis of 1903 in the United States originated in speculation on the exchanges. But in the more general crises it is much more difficult to give the proper weighting to the elements in which disappointment in profits originate.

MINNIE THROOP ENGLAND

UNIVERSITY OF NEBRASKA

[1] "Cela revient à dire que le coût de production tend à s'élever dans une société capitaliste progressive plus rapidement que le prix des objets de consommation qu'ils serviront à produire."—Lescure, *Crises générales et périodiques de surproduction*, p. 506.